FIG. 7, a joint member **701** is attached to the end portion of the frame **105**, and has a U-letter shape so as to be joined together with a frame of another apparatus for inputting coordinates. In the case of making no joint together with a frame of another apparatus for inputting coordinates, the joint member is folded by a hinge **702**. The joint member is not limited to the U-letter shaped joint member, and a screw and a screw hole may be used in accordance with embodiments.

[**0057**] The joint member as described above is used, and thereby, a plurality of apparatuses for inputting coordinates is combined so as to secure a wide coordinate input plane. For example, an availability can be improved in the case of using the apparatus for inputting coordinates in a large conference hall or the like. In particular, the height of the optical unit **102** is made low by using the height adjusting screw **109** (see **FIG. 1**A and **FIG. 1B**), and simultaneously, the height of the reflecting section **103** is made low by using the engaging hook **601** (see **FIG. 6**). By doing so, even in the case where a plurality of apparatuses for inputting coordinates is combined, it is possible to improve a visibility of a user who views the coordinate input plane **101** from an oblique direction.

[**0058**] The light emitting section **301** shown in **FIG. 3**A and **FIG. 3B** is arranged above the coordinate input plane **101**, that is, on the side inputting a coordinate, and therefore, the light receiving section **401** is arranged on a position receiving the light traveling substantially parallel to the coordinate input plane **101**. However, the light emitting section **301** and the light receiving section **401** are not limited to the arrangement as described above. For example, as shown in **FIG. 8**A and **FIG. 8**B, either of the light emitting section **301** and the light receiving section **401** may be arranged below the apparatus for inputting coordinates. By doing so, it is possible to reduce irregularities on the surface of the apparatus for inputting coordinates **100**, and thus, to improve a user's operability.

[**0059**] The following is a description on an apparatus for inputting coordinates of this second embodiment, which calculates a coordinate point by sensing a direction of irradiation light reflected by the pointing stick. In this second embodiment, identical legends are used to designate the same constituent parts as the above first embodiment and the details are omitted. **FIG. 9**A and **FIG. 9B** are views schematically showing a corner portion including an optical unit of the apparatus for inputting coordinates which senses a direction of irradiation light reflected by the pointing stick. **FIG. 9A** is a perspective view of the apparatus for inputting coordinates, and **FIG. 9B** is a front view showing the optical unit when viewing it from a light emitting side.

[**0060**] A apparatus for inputting coordinates **800** is composed of a coordinate input plane **101** for inputting a coordinate position, an optical unit **801**, a shielding plate **802**, a support plate **104** for fixing the coordinate input plane **101**, and a frame section **105** for reinforcing the support plate **104** and fixing the shielding plate **802**. More specifically, the optical unit **802** has a light emitting section which emits light that is substantially parallel to the coordinate input plane **101** and a light receiving section which receives the light traveling substantially parallel to the coordinate input plane **101**. The shielding plate **802** absorbs the light emitted from the optical unit **801**, and shields the light from the outside.

[**0061**] In **FIG. 9**A and **FIG. 9**B, legend **106** denotes an emission light mouth which is an outlet of light from the optical unit **801**, and legend **803** denotes a pointing stick for inputting a coordinate position on the coordinate input plane **101**. In this case, the point stick **803** is attached with a sheet-like retro-reflector at its distal end portion. The retro-reflector reflects the light irradiated from the optical unit **801**. The emission light mouth **106** is also an incident light mouth which is an inlet for receiving the light from the optical unit **801**.

[**0062**] The shielding plate **802** is covered with a material absorbing light at its surface. For example, a black colored felt cloth or the like is given as the material. The above material is used, and thereby, it is possible to absorb the light irradiated from the optical unit **801**, and to relatively improve a sensitivity of the light receiving section of the optical unit **801** with respect to the irradiation light reflected by the pointing stick **803**.

[**0063**] Next, the following is a detailed description on a light receiving section and a light emitting section of the optical unit **801**. **FIG. 10**A and **FIG. 10B** are views schematically showing an internal structure of the optical unit **801**. **FIG. 10A** is a view when viewing the inside of the optical unit **801** from a direction vertically parallel with the coordinate input plane **101**, and **FIG. 10B** is a view when viewing the optical unit **801** from a direction of the emission light mouth **106**. A light emitting section **901** is composed of a light emitting element **902** which emits a beam irradiation light, and a polygon mirror **903** which reflects an irradiation light emitted from the light emitting element **902** so as to optically scan the coordinate input plane **101**. Moreover, the light receiving section **904** is composed of a cylindrical lens **905** for converging an irradiation light reflected by the pointing stick **803**, and a line sensor **906** which senses a direction of the pointing stick **803** by light converged by the cylindrical lens **905**.

[**0064**] In the apparatus for inputting coordinates **800**, the optical unit **801** is embedded in a corner portion of the frame **105**; therefore, it is possible to further reduce irregularities as compared with the apparatus for inputting coordinates **100** of the above first embodiment. As a result, a user, who inputs a coordinate point, has no hindrance, and therefore, an availability is improved.

[**0065**] Moreover, a mounting position of the optical unit **801** is variable with respect to the frame **105**, and thereby, the height of the optical unit **801** is adjustable. In order to adjust the height of the optical unit **801**, the engaging hook as shown in **FIG. 6** may be provided, or the position may be adjusted by using a screw. The mounting position is variable, and thereby, a height of irradiation light from the coordinate input plane **101** is adjustable. As a result, it is possible to improve a detection accuracy in a predetermined area causing a large error in the prior art.

[**0066**] Moreover, the shielding plate **802** may be adjusted in its height as shown in **FIG. 6**. The height of the shielding plate **802** is adjusted, and thereby, a visibility is improved in the coordinate input plane **101**. In addition, the apparatus for inputting coordinates **800** may be joined together with another apparatus for inputting coordinates by using the same member as the joint member **701** shown in **FIG. 7**. By doing so, it is possible to form a wide coordinate input plane. Further, the height of the shielding plate is made low, and thereby, a visibility can be improved.